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succeed in gaining few new converts to the propositional camp, in part because few psychologists really care about what an internal representation "really" is at a microscopic level, and in part because imagery research (e.g., of Cooper, Kosslyn, and Shepard) has progressed so well despite these objections.

Reitman, Nado, and Wilcox's chapter on "Machine Vision" describes a computer program for playing the Oriental game of Go. The program is especially noteworthy for its method of perceiving dynamic spatial groupings and interactions of game pieces across the playing board. Also included are criticisms of Minsky's notion of "frames" and of the idea of symbolic (propositional) representation obviating the need for analogical representations. Unfortunately, no reference is made to Pylyshyn's paper, which argues the opposite.

Ulric Neisser, whose 1967 *Cognitive Psychology* helped define the field, elaborates on the changes that have taken place in his thinking—changes first described in his 1976 *Cognition and Reality*. Neisser takes issue with characterization of the perceptual system as a processor of static ("snapshot") sensory input, which is a common simplification in information-processing models. In place of linear-stage models, Neisser proposes perceptual cycles to reflect the fact that perception is a continuous interplay between the environment and the active, anticipating perceiver. His new position is an eclectic mix of his own earlier ideas, of Gibson's notions of direct pickup of sensory information, and Hochberg's view of images as sets of expectancies. The chapter, which is a good one, could have been even better if Neisser had responded to some of the objections to his 1976 book. For example, why is it that no processing mechanisms need be constructed to explain direct perception, and why is it that laboratory subjects can perceive unanticipated stimuli so well under tachistoscopic conditions (a point made explicitly in the Reitman paper)? In any case, Neisser's paper is, as usual, scholarly and engaging.

Jenkins, Wald, and Pittenger's chapter describes a set of experiments on event perception that is designed to provide an operational definition for an

event as a bona fide unit of analysis. The experiments, which are based roughly on a technique popularized by Bransford and Franks, are clever; and approaching the identification of units of analysis as an empirical problem dovetails quite well with the notions of other perceptual psychologists, most notably Garner.

LEONARD UHR outlines an ambitious undertaking in artificial intelligence—namely, the creation of a complex program called SEER, which is an attempt to simulate the kinds of intelligent, integrated thought processes underlying normal, "everyday" behavior (e.g., as opposed to the "complex" behavior underlying play of the game of Go). Uhr also makes a preliminary effort to define the meaning of such tricky concepts as "consciousness," "knowledge," and "self," by identifying their corresponding structures and processes in computer programs. To the extent that the programs are well understood, this approach would seem to have more promise than most of its predecessors.

Perhaps the most significant contribution to the book is Roger Shepard's chapter, "On the Status of 'Direct' Psychophysical Measurement." Here, Shepard questions the fundamental assumption that for each physical magnitude of the stimulus there exists a corresponding psychological magnitude. He argues further that psychological magnitudes cannot be measured on anything more than an ordinal scale, and that the form of the psychophysical function is basically indeterminate. In place of "absolute" psychophysics, Shepard calls for a "relative" psychophysics, where one tries to relate *differences* (or ratios) between two or more psychological magnitudes to corresponding differences (or ratios) between physical magnitudes. He suggests that in contrast to other scientific disciplines, psychology has attempted to develop advanced scales of measurement *before* developing a basic theory of the entity being measured. In the case of the perception, the evidence is that our perceptual systems are structured so as to detect relations and not absolute magnitudes,

and our scales of measurement should be constructed accordingly.

THE remaining papers are written by the philosophers Harman, Dretske, Martin, Schwartz, Dennett, Fodor, Block, Maxwell, and Hooker. These chapters are quite scholarly by and large, but they will make difficult reading for psychologists who are rusty on their philosophy; it would be advisable for the reader to keep a dictionary of philosophical terms close at hand.

## Australian Grab Bag

J. P. Sutcliffe (Ed).

*Conceptual Analysis and Method in Psychology: Essays in Honour of W. M. O'Neil*. Sydney, Australia: Sydney University Press (U.S. distributor: ISBS, Inc., P.O. Box 555, Forest Grove, Oregon 97116), 1978. Pp. viii + 216. \$14.00.

Reviewed by ANNE CUTLER

J. P. Sutcliffe is Professor and Chairman of the Department of Psychology at the University of Sydney (Australia), where he earned his PhD. He has been a Rockefeller Fellow at Harvard University, Research Psychologist at the Educational Testing Service, and Visiting Professor at the University of Washington. Sutcliffe is editor of *Mathematics in the Social Sciences in Australia and of Mathematics Needed for Particular Social Sciences*.

W. M. O'Neil, in whose honor these essays were published, is Honorary Visiting Fellow of Macquarie University, currently retired in Roseville, Australia. He was previously Deputy Vice-Chancellor and McCaughey Professor of Psychology at the University of Sydney, where he earned his MA. O'Neil's numerous publications include *Introduc-*



tion to Method in Psychology, Elementary Psychological Statistics, The Beginnings of Modern Psychology, Fact and Theory, and Time and the Calendars.

Reviewer Anne Cutler is a Research Fellow at the University of Sussex (England). A University of Texas PhD, she was previously a Postdoctoral Fellow at Massachusetts Institute of Technology. Cutler wrote chapters in Dechert's Temporal Variables in Speech, Butterworth's Language Production (with S. D. Isard), Fromkin's Slips of the Tongue, Ear, Pen and Hand, Cooper and Walker's Sentence Processing (with D. G. Norris), and Wales and Walker's New Approaches to Language Mechanisms.

WILLIAM O'NEIL was for 20 years professor of psychology at the University of Sydney, and exerted great influence on the course of Australian psychology. In this book, 17 academics who as undergraduates took O'Neil's honors psychology program contribute essays to mark the occasion of his retirement.

It is clear from the autobiographical sketch that concludes the volume that O'Neil is proud of his undergraduate program, and with good cause: Clearly, it has produced some excellent researchers, well-known names in many fields of psychology. One feels, however, that the present contributors could have exerted themselves just a little harder to honor their one-time teacher. Three of the essays, for instance (Maze on attitudes, Meggitt on the concept of sex role as expressed in the folktales of a New Guinea tribe, and Champion on the laxness with which behavior therapists use the findings of experimental learning theory), are acknowledged to be abridged versions of work appearing elsewhere. Others make the smallest of points. Landauer, for example, claims that although the perception of subjective contours has been demonstrated for a great many figures, no one has yet pointed out that they occur in a particular figure originally drawn by Koffka and widely used as an illustration of the Gestalt principle of closure; is this, asks Landauer, because psychologists are victims of a set to perceive this figure always as a demonstration of one phenomenon, never as a demonstration of

another? On reflection, perhaps Landauer was writing tongue-in-cheek. Other less weighty contributions include McMullen's neat demonstration that the notion of precognition is internally inconsistent, and Lockhart's mournful complaint that the levels of processing approach—devised by Craik and Lockhart (*Journal of Verbal Learning and Verbal Behavior*, 1972) as an attempt to inject ecological validity into the paradigm-bound field of memory research—has itself become a self-perpetuating paradigm.

MANY contributions are, however, more substantial. The book comprises three sections, of which two ("Conceptual Analysis," "History and Methodology") reflect O'Neil's own research interests. Even these sections cover a wide range of topics, from the British intellectual forebears of the U.S. functionalists to the prejudice of current

psychology against null results, no matter how significant the claims that they disconfirm. The remaining section ("Theory and Interpretation") is still more of a grab bag; it includes, for example, Lockhart's memory paper (which should have been in the method section), New Guinea folktales, and a number of papers on vision. The latter are in general disappointing: a plea for Gibsonianism by Over, an attempt by Gillam to revive the constancy-scaling theory of illusions by stressing that cues to depth are also cues to size and shape, and a discussion of reductionism (Wenderoth & Latimer). Ross, on persistence of vision, is better value. But the most useful paper in this section is Coltheart's outline of research on phonemic recoding and on logogen (direct access) versus search models of the mental lexicon. Although only a review, it is so concise and accurate that it is quite perfectly suited—as I have already established—to introduce advanced undergraduates to these topics.

# A Too Brief Look at the Briefer Psychotherapies

Leonard Small

*The Briefer Psychotherapies. Rev. ed.* New York: Brunner/Mazel, 1979. Pp. xiv + 386. \$19.50.

Reviewed by ALBERT ELLIS

Leonard Small is Chief Consulting Psychologist at Altro Health and Rehabilitation Services and in the private practice of clinical psychology in New York City and Stony Brook, N.Y. He was previously Adjunct Professor in the Graduate School of Arts and Sciences at New York University (where he earned his PhD) and Attending Psychologist in the Department of Psychiatry at Elmhurst City Hospital (Queens, N.Y.). Small is a past President of the New York State Psychological Association and of the New York Society of Clinical Psychologists. His books include

Neuropsychodiagnosis in Psychotherapy and Emergency Psychotherapy and Brief Psychotherapy, 2nd ed. (with L. Bellak).

Albert Ellis is Executive Director of the Institute for Rational-Emotive Therapy in New York City. A Columbia University PhD, he was previously Director of the New Jersey Department of Institutions and Agencies. Ellis has been recipient of a Distinguished Psychologist Award from APA's Division of Psychotherapy. His books include Handbook of Rational-Emotive Therapy (with R. Grieger), Brief Psychotherapy in Medical and Health Practice (with